

# EUROPEAN PATENT OFFICE

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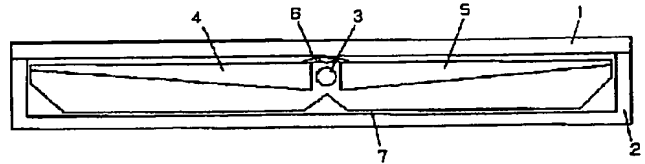
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INVENTOR : KUNISHIGE HIDENORI;

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TITLE : SURFACE LIGHT SOURCE DEVICE  
AND LIQUID CRYSTAL DISPLAY  
DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To make a surface light source device thinner, lighter in weight and to reduce a cost with respect to the large screen display of high luminance by providing one pair of light transmission plates, the light diffusing means suspended on the surface of the same flat surface side in between the light transmission plates and a light reflecting means at a surface side opposite to the same flat surface side of the light transmission plates.

SOLUTION: This light source unit is composed of a piece of a long light source 3, one pair of light transmission plates 4, 5 diffusing radiant lights of the left and right directions from the light source 3 on all surfaces of the display area of a display panel 1, a diffusion member 6 transmittingly diffusing the radiant lights from the light source 3 and a reflection plate reflection lights of a direction opposite to the panel 1. Incident lights on the light transmission plates 4, 5 are diffracted by V grooves being at a side opposite to a light-emitting surface while being totally reflected to be emitted from the light-emitting surface. However, lights transmitting the diffusion member 6 are emitted in a panel 1 direction, reflected lights pass the gap between the light source 3 and the plates 4, 5 to be guided to the reflection plate 7. Optical paths of lights radiated to the lower direction from the lights source 3 are changed with slopes of chevron projecting part being on the reflection plate 7 and the lights are reflected by the inclinations of both end parts of the plate 7 to be emitted in the panel 1 direction.

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(54) 【発明の名称】 面光源装置および液晶表示装置

(57) 【要約】

【課題】 薄型・軽量大画面用面光源装置とそれを用いた液晶表示装置。

【解決手段】 1本の長尺光源の両側に2枚の導光板を、導光板の間隙に拡散手段をそれぞれ配し、さらにはこれを複数個並列することで大画面表示の面光源装置を提供する。また、導光板の接続部を液晶パネルの非画素位置にすることで大画面液晶表示装置を提供する。

